AMENDMENTS TO THE SPECIFICATION:

Please amend paragraph [0110] of the specification as follows:

Because R_k is a unitary matrix, and because estimates of signals contained in the rows of $\tilde{V}_k$ are orthogonal to one another:

$$\tilde{V}_k^T \tilde{V}_k = R_k^T R_k = I \quad (13)$$

$$\text{Then } X_k X_k^T = \sim_k \tilde{\Sigma}_k \tilde{\Sigma}_k^T \sim_k^T = \sim_k \tilde{\alpha}_k \sim_k^T \quad (14)$$

where $\tilde{\alpha}_k$ is an (m×m) diagonal matrix whose diagonal elements are eigenvalues of $[[X_k]] \underline{X}_k^T$.

Please paragraph [0181] as follows:

A further embodiment of the invention will now be described. When processing data from sensors in real-time, only one or a few data snapshots may be available to update a data matrix at a time: here a "snapshot" is defined as a set of simultaneous data samples, a respective single sample of a signal from each of the sensors, i.e. a ~~row~~ column of the data matrix. In such cases, any moving data window approach as described earlier will require a large amount of window overlap, i.e. the position of the window can only be moved a limited amount between successive processing stages. Thus a large number of windows may be required to cover the data: for each window, this corresponds to a significant degree of and perhaps a large amount of redundancy as the window's statistics (although initialised to the desired solution) will be re-computed. One approach for dealing with this for a sliding window version of the invention (the example described earlier) is to subtract the statistics of the oldest snapshot(s) from the overall statistics. The statistics of the latest added snapshot(s) are then computed and added to the difference between the overall statistics and those of the oldest snapshot(s). There are also two ways of implementing the BLISS algorithm: one version operates directly on sensor signals or digitised equivalents, and the other operates directly on a fourth order tensor derived from those signals.

Sets of results from these versions will be equivalent and may be used for the moving window approach of the preceding embodiment.